

## REMARKS

Claims 1-11 and 23- 24 remain before the Examiner for reconsideration. Claims 1 and 14 have been amended. No new matter has been added and the claims amendment are fully supported in the specification and drawings as originally filed.

## OBJECTIONS

Claim 22 is objected to as being in improperly dependent form for failure to limit subject matter of a previous claim. Claim 22 has been canceled and the object is moot.

## REJECTIONS UNDER 35 USC 112

1. Claim 1-11 and 22-24 stand rejected under 35 USC 112 for failing to comply with the written description requirement. The Office Action alleges that the claims contain subject matter of “recessed encoding rings” that was not described in the specification in such a way to reasonably convey to one skilled in the relevant art that the inventors has possession of the claimed invention.

The “recessed encoding rings” of Applicants’ invention was disclosed in the Specification as originally filed, including at page 56, paragraph 3, “encoding rings 4641” and in Fig. 126. However, Claim 1 has been amended to include at least one encoding ring “discontinuous in the tubular” body. The support is not only found in the specification at page 56, as discussed above, but also supported in US Application Serial Number 09/765,498 (which issued as US 7,018,363) in Fig.'s 2-4 accompanying text describing these figures. Reconsideration is requested.

1. The Office Action alleges that Claim 14 is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

Claim 14 has been amended to include “a syringe wall.” Therefore, reconsideration is requested.

#### REJECTIONS UNDER 35 USC 102(b)

Claim 14 stands rejected under 35 USC 102(b) as being anticipated by Kintner (hereinafter) “Kitner”. This rejection should be withdrawn in view of the remarks and amendments made herein.

Claim 14 is directed to a syringe including at least one rotation member comprising at least one notch defined in a terminating edge of the rearward end of the tubular body for releasably retaining a corresponding member of the syringe retaining mechanism of the injector, wherein the notch forms a discontinuous edge at the terminating end of the tubular body and extends through a syringe wall from an inside to an outside. Further, Claim 14 has been amended to include that “the terminating edge extends in the axial direction forming a continuous axial surface from the rearward end of the tubular body. The novel part of this syringe design is the notch which is shown in Fig. 48A at 2327. For example, the notch is formed in the edge of the tubular syringe body so that posts 2372 can operably engage the notches in the syringe. (see page 38, second paragraph, lines 5 -9). This unique structure can not be found in Kitner.

Rather, Kintner (Fig 1 and 4) teaches a syringe (20) for use with an injector, the syringe comprising a body (22), a plunger (24). Flanges (66, 68) extend outwardly from the syringe barrel 22 and have aperture holes 56, 58 which do not extend out to any edge of the flange. Therefore, there is no disclosure in Kintner of “rotation member[s] comprising at least one notch defined in a terminating edge of the rearward end of the tubular body for releasably retaining a corresponding member of the syringe retaining mechanism of the injector, wherein the notch forms a discontinuous edge at the terminating end of the tubular body and extends through a syringe wall from an inside to an outside, wherein the terminating edge extends in the axial direction forming a continuous axial surface from the rearward end of the tubular body.” Accordingly, Kintner does not disclose all of the structural features of Applicants’

invention of Claim 14. Reconsideration of this rejection is requested.

### REJECTIONS UNDER 35 USC 103

Claims 1-11 and 22-24 stand rejected under 35 USC 103(a) as being obvious over Reilly in view of Hitchins. The rejection should be withdrawn in view of the remarks and amendments made herein.

Claim 1 is directed to a syringe and has been amended to include, "wherein the at least one attachment member includes an inclined surface extending radially outward a distance from the tubular body that defines a shoulder having a diameter larger than the tubular body."

Applicants' invention includes this novel structure as shown in the Figures including 14, 15, 19 and 46 and as described in the specification as filed, including at page 32, para 1.

The Office Action alleges that Reilly teaches a syringe for use with an injector comprising a body (118), a plunger (26), an attachment member (inclined surface 120 and shoulder/tab/ridge 126) at the frontward end of the body for retaining a corresponding mechanism on the injector (133). See Fig. 10/11. The attachment member is an annular ridge (126) which is also a projection of tab member. See Fig 10. Regarding Claim 8, 9 see flange (132). Regarding Claims 10 and 11, depending on the orientation of the powerhead of the injector, the attachment member could be moved in either an axial or a vertical direction. Reilly et al does not teach an encoding device located on the body of the syringe. Hitchins teaches a syringe body (50) for use with an injector (20) where the syringe includes coding (190, 192). 190, 192 are expressly disclosed as recesses and they are provided discontinuously on the circumference of the syringe body. Office Action alleges that It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the known technique of an encoding ring on a syringe with the device of Reilly in order to provide an indication of the medication contained with the syringe or the size of the syringe.

However, Reilly does not teach or suggest Applicants' invention. Reilly is directed to:

[a] fluid injector indicated generally at 110 includes a pressure jacket 112 with a plurality of locking fingers 114 for engaging a syringe 116, shown in an open position in FIG. 10 and a closed position in FIG. 11. Pressure jacket 112 is connected at its rear end 132 to injector head 20 by any suitable means, such as a threaded connection (not shown). Syringe 116 has a cylindrical body 118 having a front end 120 and an open rear end 122. The front end 120 of syringe 116 is tapered and connected to a neck 124. A disk shaped drip flange 126 is formed around the neck 124. (Col. 5, lines 48-57, *Emphasis Added*)

Thus, the drip flange 126 is not an attachment member because structurally it does not provide any attachment between the body and the pressure jacket 112 that retains the syringe. Further, drip flange 126 is not releasably retained by the syringe retaining mechanism, rather drip flange 126 remains outside of the syringe jacket 126. In fact, in Reilly the “front end 142 of the locking ring 140 is a distal annulus extending radially inwardly to form an open orifice 144 which permits the syringe body 118 to be inserted into pressure jacket 112, but does not permit the drip flange 126 to be inserted into pressure jacket 112. FIG. 10 shows that the front interior surface of the front end 142 is sloped to engage locking fingers 114 when in a closed position, as shown in FIG. 11 and more fully described below.” (Col. 5, lines 11-19, *Emphasis Added*.) Also, the drip flange 126 of Reilly is **not** disposed on the the body of the syringe, but is disposed on the neck 124 which is distally located from a tapered front end 120 and, thus from the body 118. Addiitonally, the front end 120 is an inclined suface that extends inwardly toward the neck 124. Therefore, Reilly does not disclose ““wherein the at least one attachment member includes an inclined surface extending radially outward a distance from the tubular body that defines a shoulder having a diameter larger than the tubular body” as claimed in Applicants’ invention of Claim 1.

Further, the Office Action alleges that Reilly does not teach an encoding device located on the body of the syringe. Hitchins teaches a syringe body (50) for use with an injector (20) where the syringe includes coding (190, 192). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the known technique of an encoding ring on a syringe with the device of Reilly in order to provide an indication of the medication contained with the syringe or the size of the syringe, for example.

The Office Action also alleges that Hitchins teaches a syringe body (50) for use

with an injector (20) where the syringe includes coding (190, 192), and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the known technique of an encoding ring with the device of Reilly in order to provide an indication of medication contained with the syringe or the size of the syringe.

However, there is not a teaching or suggestion in Hitchins of Applicants' invention of "at least one encoding ring discontinuous within in the tubular body and formed circumferentially around at least a portion of the rear end of the tubular body and operable to provide syringe information to the injector" Rather in Hitchins, depressions 190, 192 are formed in the outer most flanges 170, 170'. The depressions 190, 192 are used to activate a mechanical spring activate switch. (Col. 10, line 66 – Col. 11, line 6). Thus, these depressions 10, 192 are not the ring that is formed within in the tubular body, rather they are located on proximal face of mounting flanges 170, 170'. Further, As illustrated in Fig. 5, a spring-actuated sensor switch 194 may be appropriately positioned to be activated by one of the depressions 190 or 192. Similarly, other depressions may be selectively formed in substantially any area of the mounting flange. (see Col., 11, lines 1-13). Thus, this requires the depressions to be located at the proximal end of the syringe of the mounting flanges that extend outwardly from the syringe body (See Fig. 9). Thus, this is entirely different than Applicants' invention. Therefore, Hitchins fails to remedy the deficiencies of Reilly. Reconsideration of Claim 1 is requested.

Regarding Claim 3, Reilly does not teach or suggest Claim 3 because drip flange 126 is not a projection that is adapted to engage corresponding members of the syringe retaining mechanism to enable release of the syringe from the injector through rotational movement. (see Col. 6, lines 20-37),

Regarding Claim 2, Reilly does not teach or suggest that the at least one attachment member comprises an annular ridge disposed on the tubular body. Rather the attachment member is forward of the front end 120 of the syringe which is connected to a neck 124. And, the drip flange 126 is formed around the neck 124 (Col. 5, lines 54-57)

Regarding Claim 4, Reilly does not teach or suggest the at least one attachment member that comprises one or more tab members because the drip flange 126 is one

continuous disk shaped flange that is formed around the neck.

Regarding Claim 5, Reilly does not teach or suggest the tab members that comprise a first tab end attached to the body and a second tab end adapted to engage the syringe retaining mechanism of the injector. Rather, as discussed above drip flange 126 is connected and formed around the neck and does not attach to any part of the syringe retaining mechanism.

Regarding Claim 6, Reilly does not teach or suggest tab members that are resilient members. In fact, Reilly teaches a drip flange 126 that is fixed around the neck 124. Further, Hitchins does not remedy any of the deficiencies of Reilly, and therefore Claims 2-11 and 22-24 are not taught or disclosed by either Reilly or Hitchins, alone or in combination.

Regarding Claim 10 and 11, Claims 10 and 11 have been amended to include that the attachment member is moved in the axial/vertical "relative to the axial direction of injector." Support can be found in the specification as originally filed. Reilly does not disclose this because there is no disclosure of an attachment member 126. Reconsideration is requested.

Further, Claims 2-11 and 22-24 depend from Claim 1, which as discussed is believed to be allowable. Accordingly, Claims 2-11 and 22-24 are also believed to be allowable. Reconsideration of the rejections of Claims 2-11 and 22-24 is requested.

#### RESPONSE TO ARGUMENTS

Regarding Examiner's Response to Arguments in the Office Action mailed August 21, 2009 regarding Hitchins, Applicants believe that the encoding rings 4641 of the invention with a completely different structure provides novel subject matter and is not obvious in light of the Hitchins reference, including the arguments set forth herein which discuss the structural differences between the two. Reconsideration is requested.

In view of the above remarks, the Applicants respectfully request that the Examiner withdraw the rejections of the claims, indicate the allowability of the claims and arrange for an official Notice of Allowance to be issued in due course.

Respectfully submitted,

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